11		(a)	selecting a page having "free" status
12	,		and changing the status of said page
13			to "cacheable"; and
14		(b)	dynamically allocating a block of
15			said page to be accessed by said
16			processor;
17	•		
18		if a	further block of memory is required
19	for storage of	data	local to a specific processor then:
20		(a)	if a page having "cacheable" status
21			has an unallocated block, dynamically
22			allocating said block of said page to
23			be accessed by said processor; and
24		(b)	if no block of a page having
25			"cacheable" status is available then
26			selecting a page having "free"
27			status, changing the status of said
28			page to "cacheable" and dynamically
29			allocating a block of said page to be
30			accessed by said processor;
31	,		
32		if a	block of memory is required for
33	storage of data	a to l	pe accessed by more than one processor
34	then:		
35		(a)	selecting a page having "free" status
36			and changing the status of said page
37			to "non-cacheable"; and
38		(b)	dynamically allocating a block of
39			said page to be accessed by any
40			processor;
41			
42		if a	further block of memory is required
43	for storage of	data	to be accessed by more than one
44	processor then		_
45		(a)	if a page having "non-cacheable"
46			status has an unallocated block,
47			dynamically allocating said block of

 \bigcup

A

48	said page to be accessed by any
49	processor; and
50	(b) if no block of a page having "non-
51	cacheable" status is available then
52	selecting a page having "free"
53	status, changing the status of said
54	page to "non-cacheable" and
55	dynamically allocating a block of
56	said page to be accessed by any
57	processor;
58	retaining a page record as to the status of
59	each page; and
60	retaining an allocation record as to which
61	blocks of a page have been allocated.
	, 9
1	10. (New) A method according to claim wherein if an allocated block is no longer required, the
2	wherein if an allocated block is no longer required, the
3	allocation record is amended to discard the allocation of
4	the block.
	S 10
1	10 8 11. (New) A method according to claim
2	wherein if no blocks on a page of memory having
3	"cacheable" or "non-cacheable" status are allocated, the
4	status of said page is changed to "free".
	$\mathcal{P}_{\mathcal{P}}$
1	i (New) A method according to claim jo
2	wherein if no blocks on a page of memory having
3	"cacheable" or "non-cacheable" status are allocated, the
4	status of said page is changed to "free".
	8
1	19. (New) A method according to claim
2	wherein the step of discarding the allocation of a block
3	allocated from a page having "cacheable" status comprises
4	the step of discarding the data of the block.
	1 /
1	14. (New) A microprocessor system comprising:

A

2	at least two processors, each processor having				
3	a cache memory; and				
4	a system memory which is divided into pages,				
5	each of which initially has a "free" status and is				
6	subdivided into unallocated blocks;				
7	wherein the system is responsive to a first				
8	request for allocation of memory space of cacheable or				
9	non-cacheable type, by:				
10	dynamically allocating a block of memory				
11	from a page of "free" status, the system thereafter				
12	changing the status of said page from "free" to				
13	"cacheable" or "non-cacheable" as the case may be; and				
14	is responsive to a further request for				
15	allocation of memory space of cacheable or non-cacheable				
16	type, by:				
17	dynamically allocating a block of memory				
18	from a page of appropriate status; or				
19	if such a block is unavailable,				
20	dynamically allocating a block from a page having "free"				
21	status, the system thereafter changing the status of said				
22	page from "free" to "cacheable" or "non-cacheable" as the				
23	case may be.				
1	15. (New) A system according to claim 14				
2	wherein the system is responsive to a request that an				
3	allocated block of memory is to be discarded.				
	7 3				
1	$\frac{3}{3}$ 16. (New) A system according to claim 14, the				
2	system further being responsive to a request to discard a				
3	block in that if said block is the only allocated block				
4	on the relevant page of memory then the system changes				
5	the status of said page to "free".				
	4 <u>1</u>				
1	1/1. (New) A system according to claim 1/1				
2	wherein the cache memory of each processor is divided				
3	into lines.				

A

5 18. (New) A system according to claim 19 wherein the size of the blocks of the system memory is a whole multiple of the size of the lines.

1 2 3

1

2

1

2

wherein the cache memory of each processor is divided into lines.

wherein 20. (New) a system according to claim 100 herein the size of the blocks of the system memory is a whole multiple of the size of the lines.

spoloo

REMARKS

A Request For One-Month Extension plus the fee is enclosed.

In the office action, the Examiner has objected that the priority claim in the declaration is incorrect. We enclose with this response a new declaration with the correct priority date inserted.

Claims 1-8 have been canceled. New claims 9 and 14 correspond substantially to original claims 1 and 3 respectively.

The Examiner objected to original claim 3 as failing to comply with 35 U.S.C. § 112. It is submitted that this objection is now moot in view of the cancellation of original claim 3 and the insertion of new claim 14.

The Examiner also objected to original claims 1 and 8 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,885,680 (Anthony) in view of U.S. Patent No. 5,897,660 (Reinders), U.S. Patent No. 5,321,834 (Weiser) and U.S. Patent No. 5,075,848 (Lai).

New claim 14 explicitly recites that the system comprises a system memory which is "divided into pages, each of which initially has a "free" status and is subdivided unto unallocated blocks."